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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,595	12/21/2004	Norbert Steiner	260501US0PCT	5067

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EXAMINER
PEZZUTO, HELEN LEE

ART UNIT	PAPER NUMBER
1713	

NOTIFICATION DATE	DELIVERY MODE
09/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/518,595	STEINER ET AL.	
	Examiner	Art Unit	
	Helen L. Pezzuto	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 8-15* is/are pending in the application.

4a) Of the above claim(s) *11-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8-10,14 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-5 and 8-15* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to claims 1, 4-5, the cancellation of claims 6-7 and the addition of claim 15 filed in the response on 8/20/07 are acknowledged. Currently, claims 1-5, 8-10 and 14-15 are under consideration.

In light of applicant's amendment and remarks, the 103 rejection over JP-10-309405 is hereby withdrawn as the transitional phrase a monomer composition "consisting of" excludes the anionic vinyl monomer taught in the reference.

Election/Restrictions

1. This application contains claims 11-13 drawn to an invention nonelected with traverse in the reply filed on 3/6/07. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

2. Claims 11-13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3/6/07.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding monomer (ii), do applicants intend dimethylaminopropyl acrylamide quaternized with a "salt" of a C1 to C3 alkyl or alkylene group or a benzyl group?

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-5, 8-10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US-362) or Takeda (US-415) for the reasons of record.

US 5,776,362 to Sato et al. discloses a copolymer containing one or more cationic monomers, a vinyl carboxylic acid monomer and a nonionic monomer. Suitable cationic monomers are defined by general formula (1), including (meth)acryloyloxytrimethyl ammonium salt and (meth)acrylamidepropyldimethylammonium salts, which fall within the scope of the instant monomers (iii) and (ii), respectively (col. 1, line 49 to col. 2, line 51; col. 5, Example 4). The instant (meth)acrylamide is taught within the scope of patentees' vinylic carboxylic acid monomer and nonionic comonomer is (col. 2, 1-4, lines 57-61). Prior art teaches various conventional polymerization methods to produce the copolymer, inclusive of those recited. Accordingly, it would have been obvious to on e having ordinary skill in the art to select a monomer mixtures containing the recited (i), (ii), and (iii) in the formation of prior art sludge dehydrating agent, motivated by the reasonable expectation of success. Furthermore, the examiner is of the position that the recited toxicity index and solution viscosity are inherent properties in prior art polymer product as identical monomers are utilized to produce the resultant polymer product as presently claimed. In any event, it would have been obvious to one having

ordinary skill in the art to determine the optimum solution viscosity based on the intended application.

Similarly, US 5,587,415 to Takeda discloses a water soluble cationic copolymer derived from dispersion polymerized product of a mixture of cationic monomer defined by formula (1) and/or (2). Suitable cationic monomers include quaternized salts of dimethylaminoethyl (meth)acrylate and dimethylaminopropyl(meth)acrylamide (col. 3, lines 4-67). Other preferred comonomers include (meth)acrylamide (col. 4, lines 1-8; working examples 1-3). Regarding the C_1 to C_3 alkyl or alkylene group or benzyl quaternizing group limitation for monomer (ii) substituent expressed in the amended claim 1, the examiner takes the position that the claimed propyl substituent (i.e. C_3 alkyl) are homologue of the discloses butyl (i.e. $R_4=(CH_2)_nCH_3$, n=3). Homologues are compounds differing only by a methylene linkage and possessing similar structure. Accordingly, it would have been obvious to one having ordinary skill in the art to replace the quaternized butyl substituent in the dimethylaminopropyl (meth)acrylamide of prior art with a homologue such as propyl in view of their closely related structures and the resulting expectation of similar properties. Prior art discloses dispersion

polymerization, but is silent in the other polymerization methods expressed in claims 8-10. The examiner is of the position that the patentability of the claimed polyelectrolyte is determined based on the product itself, not the method of making it, because prior art teaches a product which reasonably appears to be identical to that of presently claimed. Similarly, the recited toxicity index is inherent in prior art product as stated in the precedent paragraph. Thus, rendering obvious the instant claims.

Response to Arguments

Applicant's amendment and remarks filed on 8/20/07 have been fully considered. Firstly applicant urges that the transitional phrase "consisting of" with respect to the recited monomer composition excludes the metal salt discloses in Sato et al. The examiner disagrees as prior art metal salt is not a member of a "monomer" composition. The present polyelectrolyte composition does not exclude its presence. Secondly, applicant urges Takeda teaches away from using C_3 or lower alkyl halide in formula (1) because the resulting polymer is partly soluble in the salt solution. The examiner respectively disagrees. It is the examiner's understanding that patentee intends the resulting copolymer to be insoluble in the aqueous salt

solution used as the polymerization medium, thus forming cationic copolymer dispersion. The dispersant used in the polymerization, on the other hand, is preferred to be a cationic polymer which is soluble in the aqueous salt solution (col. 4, lines 9-13, 22-27). In any event, in the determination of obviousness, all disclosures of a reference is relevant for all that it fairly teaches, including unpreferred embodiments, and not only for what is indicated as preferred. Finally, comparative data of record have been carefully considered. The comparative results do not show criticality of the quaternizing alkyl chain length in obtaining the toxicity index expressed in the present claims. The other properties such as cationic activity upon which the applicant relies are not in the recited claims. Accordingly, the examiner's position is maintained.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will

expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helen L. Pezzuto
Primary Examiner
Art Unit 1713

hlp